

Declaration for Patent Application

LTI 246.4 CIP SKGF Ref: 0942.4980006/RWE/AGU

As a below named inventor, I hereby declare that:

My residence, mailing address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter that is claimed and for which a patent is sought on the invention entitled: Primers and Methods for the Detection and Discrimination of Nucleic Acids,

the specification of which is attached hereto unless the following box is checked:

was filed on <u>December 27, 2001</u>;
as United States Application Number 10/026,952

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information that is material to patentability as defined in 37 C.F.R. § 1.56, including for continuation-in-part applications, material information that became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or (f), or § 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or § 365(a) of any PCT international application, which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)			Priority	Claimed
(Application No.)	(Country)	(Day/Month/Year Filed)	□ Yes	□ No
(Application No.)	(Country)	(Day/Month/Year Filed)	□ Yes	□ No
Send Correspondence to:	1100 New	, GOLDSTEIN & FOX P.L.L.C. York Avenue, N.W.		

Direct Telephone Calls to:

(202) 371-2600

Washington, D.C. 20005-3934

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor	Irina NAZARENKO		
Signature of sole or first inventor	Nagarens	march, 01, 02	Date
Residence	V Gaithersburg, Marland		
Citizenship	U.S.A.		
Mailing Address	3 Rudis Way Gaithersburg, Maryland 2	0878	
Full name of second inventor	Ayoub RASHTCHIAN	1	
Signature of second inventor			Date
Residence	Gaithersburg, Maryland		
Citizenship	U.S.A.		
Mailing Address	22418 Sweetleaf Lane Gaithersburg, Maryland 208	82	
Full name of third inventor	Joseph SOLUS		
Signature of third inventor			Date
Residence	Madison, Alabama		
Citizenship	U.S.A.		
Mailing Address	201 Walden Glen Road Madison, Alabama 35758		

Full name of sole or fourth inventor	Richard M. PIRES	
Signature of sole or fourth inventor		
Residence	Germantown, Maryland	
Citizenship	U.S.A.	
Mailing Address	19430 Breezedale Lane Germantown, MD 20876	
Full name of sole or fifth inventor	Marlene DARFLER	
Signature of sole or fifth inventor		Date
Residence	Derwood, Maryland	
Citizenship	U.S.A.	
Mailing Address	7000 Needwood Road Derwood, Maryland 20855	
Full name of sole or sixth inventor	Gulilat GEBEYEHU	
Signature of sole or sixth inventor		Date
Residence	Potomac, Maryland	
Citizenship	U.S.A.	
Mailing Address	12400 Rivers Edge Drive Potomac, Maryland 20854	
Full name of sole or seventh inventor	Mekbib ASTATKE	
Signature of sole or seventh inventor		Date
	Germantown, Maryland	
Residence		
Residence Citizenship	U.S.A.	



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	STERNE, KESSLER,	GOLDSTEIN & FOX P.L.L.C.		
	1100 New Y	ork Avenue, N.W.		
	S	uite 600		
	Washington	, D.C. 20005-3934		

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Full name of sole or first inventor	Irina NAZARENKO	
Signature of sole or first inventor		Date
Residence	Gaithersburg, Marland	
Citizenship	U.S.A.	
Mailing Address	3 Rudis Way Gaithersburg, Maryland 20878	
Full name of second inventor	Ayoub RASHTCHIAN	
Signature of second inventor	Ayoub Ranktelain	Date 3/3/02
Residence	Gaithersburg, Maryland	
Citizenship	U.S.A.	
Mailing Address	22418 Sweetleaf Lane Gaithersburg, Maryland 20882	
Full name of third inventor	Joseph SOLUS	
Signature of third inventor		Date
Residence	Madison, Alabama	
Citizenship	U.S.A.	F
Mailing Address	201 Walden Glen Road Madison, Alabama 35758	



Full name of sole or fourth inventor	Richard M. PIRES	
Signature of sole or fourth inventor		
Residence	Germantown, Maryland	
Citizenship	U.S.A.	
Mailing Address	19430 Breezedale Lane Germantown, MD 20876	
Full name of sole or fifth inventor	Marlene DARFLER	
Signature of sole or fifth inventor		Date
Residence	Derwood, Maryland	
Citizenship	U.S.A.	
Mailing Address	7000 Needwood Road Derwood, Maryland 20855	
Full name of sole or sixth inventor	Gulilat GEBEYEHU	
Signature of sole or sixth inventor		Date
Residence	Potomac, Maryland	
		···
Citizenship	II S A	
Citizenship . Mailing Address	U.S.A. 12400 Rivers Edge Drive Potomac, Maryland 20854	
Nailing Address	12400 Rivers Edge Drive	
	12400 Rivers Edge Drive Potomac, Maryland 20854	Date
Aailing Address ull name of sole or seventh inventor	12400 Rivers Edge Drive Potomac, Maryland 20854 Mekbib ASTATKE	Date
Mailing Address ull name of sole or seventh inventor ignature of sole or seventh inventor	12400 Rivers Edge Drive Potomac, Maryland 20854	Date



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		Suite 600		

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Full name of second inventor	Ayoub RASHTCHIAN	
Signature of second inventor		Date
Residence	Gaithersburg, Maryland	
Citizenship	U.S.A.	
Mailing Address	22418 Sweetleaf Lane Gaithersburg, Maryland 20882	
Full name of third inventor	Joseph SOLUS	
Signature of third inventor	Ing Sels	Date 28 Frb 02
Residence	Madison, Alabama	
Citizenship	U.S.A.	
Mailing Address	201 Walden Glen Road Madison, Alabama 35758	

Full name of sole or fourth inventor	Richard M. PIRES	_
Signature of sole or fourth inventor	••	
Residence	Germantown, Maryland	_
Citizenship	U.S.A.	
Mailing Address	19430 Breezedale Lane Germantown, MD 20876	
Full name of sole or fifth inventor	Marlene DARFLER	
Signature of sole or fifth inventor		Date
Residence	Derwood, Maryland	
Citizenship	U.S.A.	
Mailing Address	7000 Needwood Road Derwood, Maryland 20855	
Full name of sole or sixth inventor	Gulilat GEBEYEHU	
Signature of sole or sixth inventor		Date
Residence	Potomac, Maryland	
Citizenship	U.S.A.	
Mailing Address	12400 Rivers Edge Drive Potomac, Maryland 20854	
		•
Full name of sole or seventh inventor	Mekbib ASTATKE	D.,
Ciamatuma of colo on acceptable instanta		Date
Signature of sole or seventh inventor		
Signature of sole or seventh inventor Residence	Germantown, Maryland	
	Germantown, Maryland U.S.A.	



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	Sterne, Kessler, C	GOLDSTEIN & FOX P.L.L.C.		
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	Su	aite 600		
•	Washington	D.C. 20005-3034		

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Irına NAZARENKO	
-	Date
Gaithersburg, Marland	
U.S.A.	
3 Rudis Way Gaithersburg, Maryland 20878	
Ayoub RASHTCHIAN	
	Date
Gaithersburg, Maryland	
U.S.A.	
22418 Sweetleaf Lane Gaithersburg, Maryland 20882	
Joseph SOLUS	
	Date
Madison, Alabama	
U.S.A.	
201 Walden Glen Road Madison, Alabama 35758	
	Gaithersburg, Marland U.S.A. 3 Rudis Way Gaithersburg, Maryland 20878 Ayoub RASHTCHIAN Gaithersburg, Maryland U.S.A. 22418 Sweetleaf Lane Gaithersburg, Maryland 20882 Joseph SOLUS Madison, Alabama U.S.A. 201 Walden Glen Road

Full name of sole or fourth inventor	Richard M. PIRES
Signature of sole or fourth inventor	Richard M. Pires 2/27/02
Residence	Germantown, Maryland DAMASCUS MD
Citizenship	U.S.A.
Mailing Address	19430 Breezedale Lane 10719 BETHESDA CHURCH RO Germantown, MD 20876 DAMAS CUS MD 20872
Full name of sole or fifth inventor	Marlene DARFLER
Signature of sole or fifth inventor	Date
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Citizenship	U.S.A.
Mailing Address	7000 Needwood Road Derwood, Maryland 20855
	Dei mood, Maryland 20033
Full name of sole or sixth inventor	Gulılat GEBEYEHU
Full name of sole or sixth inventor Signature of sole or sixth inventor	Gulilat GEBEYEHU Could Cler 3/8/02
	Gulilat GEBEYEHU Could Gebeyehu Potomac, Maryland
Signature of sole or sixth inventor	Gull-lefi 3/8/02
Signature of sole or sixth inventor Residence	Potomac, Maryland U.S.A. 12400 Rivers Edge Drive
Signature of sole or sixth inventor Residence Citizenship	Potomac, Maryland U.S.A. Date 3/8/07
Signature of sole or sixth inventor Residence Citizenship	Potomac, Maryland U.S.A. 12400 Rivers Edge Drive
Signature of sole or sixth inventor Residence Citizenship Mailing Address	Potomac, Maryland U.S.A. 12400 Rivers Edge Drive Potomac, Maryland 20854 Mekbib ASTATKE
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Signature of sole or sixth inventor Residence Citizenship Mailing Address Full name of sole or seventh inventor Signature of sole or seventh inventor Residence	Potomac, Maryland U.S.A. 12400 Rivers Edge Drive Potomac, Maryland 20854 Mekbib ASTATKE Mellik Astalk 3/4/02.



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Signature of second inventor		Date
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Full name of third inventor	Joseph SOLUS	
Signature of third inventor		Date
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Citizenship	U.S.A.	
Mailing Address	201 Walden Glen Road Madison, Alabama 35758	

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Signature of sole or fourth inventor	!	
Residence	Germantown, Maryland	_
Citizenship	U.S.A.	
Mailing Address	19430 Breezedale Lane Germantown, MD 20876	-
Full name of sole or fifth inventor	Marlene DARFLER	
Signature of sole or fifth inventor	Muere he Dayeer	Date 3-11-02
Residence	/ Derwood, Maryland	
Citizenship	U.S.A.	
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Full name of sole or sixth inventor	Gulilat GEBEYEHU	
Full name of sole or sixth inventor Signature of sole or sixth inventor	Gulilat GEBEYEHU	Date
	Gulilat GEBEYEHU Potomac, Maryland	Date
Signature of sole or sixth inventor		Date
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Signature of sole or sixth inventor Residence Citizenship	Potomac, Maryland U.S.A. 12400 Rivers Edge Drive	Date
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Signature of sole or sixth inventor Residence Citizenship Mailing Address Full name of sole or seventh inventor Signature of sole or seventh inventor Residence	Potomac, Maryland U.S.A. 12400 Rivers Edge Drive Potomac, Maryland 20854 Mekbib ASTATKE Germantown, Maryland	,

APR 3 0 2002

LTI 246.4 CIP SKGF Ref: 0942.4980006/RWE/AGU

POWER OF ATTORNEY FROM ASSIGNEE

Me me Me
Avenue Carlshad CA 92008 is assigned of the entire right title and interest for the Huited State of Avenue Carlshad CA 92008.
Avenue, Carlsbad, CA 92008, is assignee of the entire right, title and interest for the United States of America (as
defined in 35 U.S.C. § 100), by reason of an Assignment to the Assignee executed on 1) 3/1/02
2) 3 3 02 ;3) 2 28 02 ;4) 2 27 02 ;5) 3 11 02 ;6) 2/28/02 ;
of an invention known as Primers and Methods for the Detection and Discrimination of
Nucleic Acids (Attorney Docket No. 0942.4980006/RWE/AGU), which is disclosed and claimed in a patent
application of the same title by the inventor(s) 1) Irina NAZARENKO, 2) Ayoub RASHTCHIAN, 3) Joseph
SOLUS, 4) Richard M. PIRES, 5) Marlene DARFLER, 6) Gulilat GEBEYEHU, 7) Mekbib ASTATKE (said
application filed December 27, 2001 at the U.S. Patent and Trademark Office, having Application Number
10/026,952).

Rus Reg No. 32,853

The Assignee hereby appoint the U.S. attorneys associated with **CUSTOMER NUMBER 28393** to prosecute this application and any continuation, divisional, continuation-in-part, or reissue application thereof, and to transact all business in the U.S. Patent and Trademark Office connected therewith, such attorneys currently being: Robert Greene Sterne, Esq., Reg. No. 28,912; Edward J. Kessler, Esq., Reg. No. 25,688; Jorge A. Goldstein, Esq., Reg. No. 29,021; David K.S. Cornwell, Esq., Reg. No. 31,944; Robert W. Esmond, Esq., Reg. No. 32,893; Tracy-Gene G. Durkin, Esq., Reg. No. 32,831; Michele A. Cimbala, Esq., Reg. No. 33,851; Michael B. Ray, Esq., Reg. No. 33,997; Robert E. Sokohl, Esq., Reg. No. 36,013; Eric K. Steffe, Esq., Reg. No. 36,688, Michael Q. Lee, Esq., Reg. No. 35,239; Steven R. Ludwig, Esq., Reg. No. 36,203; John M. Covert, Esq., Reg. No. 38,759; and Linda E. Alcorn, Esq., Reg. No. 39,588. The Assignee hereby grants said attorneys the power to insert on this Power of Attorney any further identification that may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office.

Send correspondence to:

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C. 1100 New York Avenue, N.W. Suite 600 Washington, D.C. 20005-3934 U.S.A.

Direct phone calls to 202-371-2600.

FOR:	Invitrogen Corporation
SIGNATURE:	Ellen Hanna
BY:	Alan W. Hammond
TITLE:	Chief Intellectual Property Counsel
DATE:	3/13/2002



ASSIGNMENT

In consideration of the sum of One Dollar (\$1.00) or equivalent and other good and valuable consideration paid to each of the undersigned inventor(s): 1) Irina NAZARENKO, 2) Ayoub RASHTCHIAN, 3) Joseph SOLUS, 4) Richard M. PIRES, 5) Marlene DARFLER, 6) Gulilat GEBEYEHU, 7) Mekbib ASTATKE, the undersigned inventor(s) hereby sell(s) and assign(s) to Invitrogen Corporation (the Assignee) his/her entire right, title and interest, including the right to sue for past infringement and to collect for all past, present and future damages:

check applicable box(es) ☐ for the United States of America (as defined in 35 U.S.C. § 100), ☐ and throughout the world,

(a) in the invention(s) known as Primers and Methods for the Detection and Discrimination of Nucleic Acids for which application(s) for patent in the United States of America has (have) been executed by the undersigned on 1) 3/1/02; 2); 3); 4); 5); 6); 7) (also known as United States Application No. (10/026,952/RWE/AGU), filed December 27, 2001), in any and all applications thereon, in any and all Letters Patent(s) therefor, and

Rut Ry No. 32,893

- (b) in any and all applications that claim the benefit of the patent application listed above in part (a), including continuing applications, reissues, extensions, renewals and reexaminations of the patent application or Letters Patent therefor listed above in part (a), to the full extent of the term or terms for which Letters Patents issue, and
- (c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals and reexaminations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable;

all such rights, title and interest to be held and enjoyed by the above-named Assignee, its successors, legal representatives and assigns to the same extent as all such rights, title and interest would have been held and enjoyed by the Assignor had this assignment and sale not been made.

The undersigned inventor(s) agree(s) to execute all papers necessary in connection with the application(s) and any continuing (continuation, divisional, or continuation-in-part), reissue, reexamination or corresponding application(s) thereof and also to execute separate assignments in connection with such application(s) as the Assignee may deem necessary or expedient.

The undersigned inventor(s) agree(s) to execute all papers necessary in connection with any interference or patent enforcement action (judicial or otherwise) related to the application(s) or any continuing (continuation, divisional, or continuation-in-part), reissue or reexamination application(s) thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference or patent enforcement action.

The undersigned inventor(s) hereby represent(s) that he/she has full right to convey the entire interest herein assigned, and that he/she has not executed, and will not execute, any agreement in conflict therewith.

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IN WITNESS WHEREOF, executed by the undersigned inventor(s) on the date opposite his/her name.

Date: 13-01-02	Signature of Inventor:	Mayarente
		Irina NAZARENKO
Date:	Signature of Inventor:	Ayoub RASHTCHIAN
•		Ayoub RASHTCHIAN
Date:	Signature of Inventor:	
		Joseph SOLUS
Date:	Signature of Inventor:	Richard M. PIRES
Date:	Signature of Inventor:	Marlene DARFLER
		Materic DARTLER
Date:	Signature of Inventor:	
		Gulilat GEBEYEHU
Date:	Signature of Inventor:	
		Mekbib ASTATKE

ASSIGNMENT

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(a) in the invention(s) known as Primers and Methods for the Detection and Discrimination of Nucleic Acids for which application(s) for patent in the United States of America has (have) been executed by the undersigned on 1) ; 2) 3/3/02; 3) ; 4) ; 5) ; 6) ; 7) (also known as United States Application No. (10/026,952/RWE/AGU), filed December 27, 2001), in any and all applications thereon, in any and all Letters Patent(s) therefor, and

lut Ly. No. 32, 893

- (b) in any and all applications that claim the benefit of the patent application listed above in part (a), including continuing applications, reissues, extensions, renewals and reexaminations of the patent application or Letters Patent therefor listed above in part (a), to the full extent of the term or terms for which Letters Patents issue, and
- (c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals and reexaminations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable;

all such rights, title and interest to be held and enjoyed by the above-named Assignee, its successors, legal representatives and assigns to the same extent as all such rights, title and interest would have been held and enjoyed by the Assignor had this assignment and sale not been made.

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IN WITNESS WHEREOF, executed by the undersigned inventor(s) on the date opposite his/her name.

Date:		Signature of Inventor:	
			Irina NAZARENKO
Date:	3/3/02	Signature of Inventor:	Ayoub Rashtchian
	•		Tiyoto Kiloffi Cilii il
Date:		Signature of Inventor:	
			Joseph SOLUS
	/		
Date:		Signature of Inventor:	
			Richard M. PIRES
Date:		Signature of Inventor	
Date.		organicale of inventor.	Marlene DARFLER
			1
Date:		Signature of Inventor:	Gulilat GEBEYEHU
Date:		Signature of Inventor:	
	<i>y</i>		Mekbib ASTATKE

DO NOT FORWARD TO ASSIGNMENT BRANCH NOT FOR RECORDATION

SKGF Ref: 0942.4980006/RWE/AGU

ASSIGNMENT

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check applicable box(es)

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✓ and throughout the world,

(a) in the invention(s) known as Primers and Methods for the Detection and Discrimination of Nucleic Acids for which application(s) for patent in the United States of America has (have) been executed by the undersigned on 1); 2); 3) 1/28/02; 4); 5); 6); 7) (also known as United States Application No. (10/026,952/RWE/AGU), filed December 27, 2001), in any and all applications thereon, in any and all Letters Patent(s) therefor, and

Ruō Reg No. 32,893

- (b) in any and all applications that claim the benefit of the patent application listed above in part (a), including continuing applications, reissues, extensions, renewals and reexaminations of the patent application or Letters Patent therefor listed above in part (a), to the full extent of the term or terms for which Letters Patents issue, and
- (c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals and reexaminations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable;

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Date:		Signature of Inventor:	
		-	Irina NAZARENKO
Date:		Signature of Inventor:	Ayoub RASHTCHIAN
Date:	28 F. hay 2002	Signature of Inventor:	Joseph SOLUS
			, , , , , , , , , , , , , , , , , , ,
		<i>G</i>	Richard M. PIRES
Date:		Signature of Inventor: _	Marlene DARFLER
Date:		Signature of Inventor:	C. I'I & CERRENTINI
!			Gulilat GEBEYEHU
Date:		Signature of Inventor: _	Mekbib ASTATKE

DO NOT FORWARD TO ASSIGNMENT BRANCH NOT FOR RECORDATION

LTI 246.4 CIP SKGF Ref: 0942.4980006/RWE/AGU

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Ruto Ry No. 32,893

- (b) in any and all applications that claim the benefit of the patent application listed above in part (a), including continuing applications, reissues, extensions, renewals and reexaminations of the patent application or Letters Patent therefor listed above in part (a), to the full extent of the term or terms for which Letters Patents issue, and
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Date:		Signature of Inventor:	
			Irina NAZARENKO
Date:		Signature of Inventor:	Ayoub RASHTCHIAN
Date:		Signature of Inventor:	Joseph SOLUS
Date:	2/27/02	Signature of Inventor:	Richard M. Pirls Richard M. PIRES
Date:		Signature of Inventor:	Marlene DARFLER
Date:	2/28/02	Signature of Inventor:	Gullet GEBEYEHU
Date:	3/4/02	Signature of Inventor:	Melbil Cistathe Mekbib ASTATKE

DO NOT FORWARD TO ASSIGNMENT BRANCH NOT FOR RECORDATION

LTI 246.4 CIP SKGF Ref: 0942.4980006/RWE/AGU

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4) ;5) 3/11/02 ;6)	; 7)	(also known
as United States Application No. (10/026,952/	RWE/AGU), filed December 2	$\frac{1}{7,2001}$, in any
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Rue Leg No. 32,893

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Date:	8-11-02	Signature of Inventor:	Marlene DARFLER
Date:		Signature of Inventor:	Gulilat GEBEYEHU
Date:		Signature of Inventor:	Mekbib ASTATKE